

We Claim:

1. A receiving and coupling part, comprising:

a carrier with an opto-electronic transmission and/or reception element;

an opening for inserting said carrier;

a casting material surrounding said transmission and/or reception element;

a coupling region for coupling an optical fiber; and

a cylindrical recess having a first end and a second end;

said first end of said cylindrical recess containing said transmission and/or reception element; and

said second end of said recess for receiving and coupling an optical fiber.

2. The receiving and coupling part according to claim 1,
wherein:

said cylindrical recess has a first open end forming said opening for inserting said carrier; and

said cylindrical recess has a second open end forming for receiving and coupling of said optical fiber.

3. The receiving and coupling part according to claim 1, further comprising:

a wall defining said cylindrical recess;

said cylindrical recess extending along a longitudinal axis;

said opening for inserting said carrier being formed in said wall of said cylindrical recess and extending substantially perpendicular to said longitudinal axis of said cylindrical recess.

4. The receiving and coupling part according to claim 1, further comprising an electrically conductive plastic material.

5. The receiving and coupling part according to claim 1, further comprising a coating of an electrically conductive layer.

6. The receiving and coupling part according to claim 1, wherein said cylindrical recess has an inner diameter

corresponding to an outer diameter of said optical fiber to be coupled.

7. The receiving and coupling part according to claim 1,
wherein said carrier is a leadframe enabling said transmission
and/or reception element to be electrically contacted.

8. The receiving and coupling part according to claim 7,
wherein:

said cylindrical recess has an optical axis; and

said leadframe longitudinally extends parallel to said optical axis of said cylindrical recess.

9. The receiving and coupling part according to claim 7,
wherein:

said cylindrical recess has an optical axis; and

said leadframe extends vertically to said optical axis of said cylindrical recess.

10. The receiving and coupling part according to claim 7,
wherein:

said leadframe is curved in an S shape having a region protruding into said cylindrical recess.

11. The receiving and coupling part according to claim 10, wherein:

said carrier is disposed at said first end of said cylindrical recess; and

said first end of said cylindrical recess enables said casting material to be introduced.

12. The receiving and coupling part according to claim 7, wherein said leadframe is planar.

13. The receiving and coupling part according to claim 12, further comprising:

a cover element; and

a wall defining said cylindrical recess;

said first end of said cylindrical recess accommodating said planar leadframe and being sealed by said cover element; and

said opening for inserting said carrier being formed in said wall of said cylindrical recess.

14. The receiving and coupling part according to claim 12, further comprising:

a fiber stop ring formed in said casting material;

said fiber stop ring surrounding said integrated lens; and

said fiber stop ring for preventing a face of said optical fiber from hitting said coupling lens.

15. The receiving and coupling part according to claim 1, wherein said casting material forms an integrated lens.

16. The receiving and coupling part according to claim 1, further comprising:

a double chamber having parallel regions;

a coupling element; and

a plurality of coupling regions;

said opto-electronic transmission and/or reception element
being a transmission element;

said coupling element and said transmission element configured
in separate ones of said parallel regions; and

said plurality of coupling regions for coupling said coupling
element and said transmission element with said optical fiber.

17. The receiving and coupling part according to claim 1,
wherein:

said transmission and/or reception element is configured on
said carrier; and

said carrier does not have electrical driver circuits or
reception circuits configured thereon.

18. The receiving and coupling part according to claim 17,
further comprising a monitor diode configured on said carrier;
said carrier having only said monitor diode and said
transmission and/or reception element configured thereon.

19. The receiving and coupling part according to claim 17, in
combination with a plug housing, wherein:

the receiving and coupling part includes an exterior wall with structures for fixing the receiving and coupling part to the plug housing.